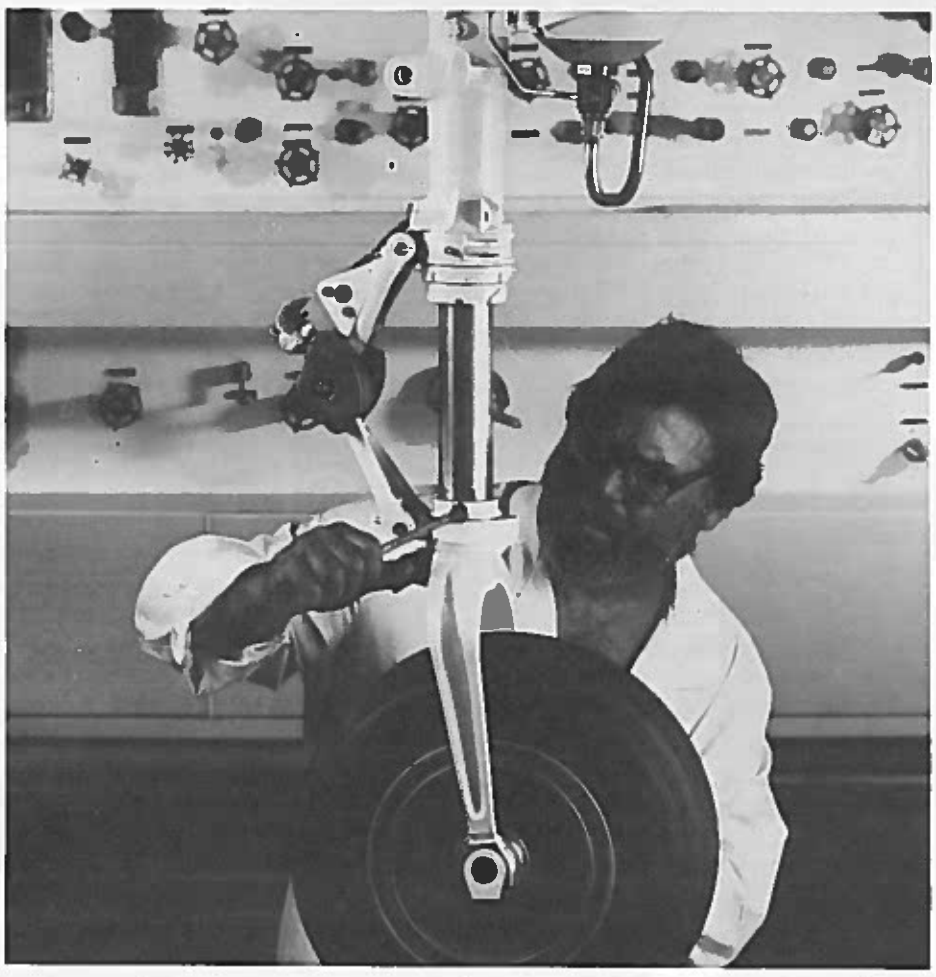
GrummanWorld

Jump Strut A Leap Forward For Landing Gear



The Grumman/Menasco jump strut prototype will be tested on the X-29 later this year. Pictured with the fully extended prototype is Bob Bowen, a Menasco manufacturing assembler.

A high performance jet aircraft is rolling down a runway, building up the speed it will need to take off. But this time, takeoff will be a little different. At a point only halfway down the runway, the pilot activates a switch that makes the aircraft's landing gear act like the legs of a giant frog and the airplane literally leaps into the sky.

The jumping airplane isn't the figment of any comic book artist's imagination. Nor is it something you are likely to see at the local airport just yet. It is the culmination of more than five years of research and development work on the "jump strut" advanced technology landing gear.

Grumman teamed with Menasco, Inc., in 1983 for a joint development program to build and test the jump strut. Menasco, a division of Colt Industries, is a Texas-based manufacturer of aircraft landing gears for both military and commercial markets.

A prototype of the jump strut mechanism, using the same F-5A nose landing gear as that used on the X-29, has already been developed and tested by Menasco. Lab testing was completed at Menasco's main production facility in Euless, Texas in January.

Flight testing of the jump strut is scheduled to take place later this year and will run for approximately two years. The program is planning to use the X-29, as the platform for those flight tests.

"We have a good deal of experience with the X-29, testing a variety of advanced aircraft technologies. The jump strut is the very latest innovation in landing gear technology and the X-29 is the perfect aircraft for testing it out," says Craig Hutzler, X-29 Program manager.

Using the jump strut, an aircraft can cut as much as 50 to 60 percent off the length of runway needed for takeoff. "By jumping five to ten feet into the air, before it has actually reached sufficient ground speed to achieve lift, the aircraft does not need as much prepared surface for a takeoff. It can use the air as the rest of its runway," says Hutzler.

The jump strut's boost can also increase the amount of weight with which an aircraft takes off. By utilizing the added takeoff performance provided by the jump strut, an aircraft can increase its cargo payload considerably without increasing its takeoff distance.

The leaping landing gear is the brainchild of Grummanite Dave Gebhard. Gebhard retired from Grumman in 1984 and is currently serving as an engineering consultant on the Jump Strut Program. He hit upon the idea in 1980, while researching technologies to provide aircraft with Short Takeoff and Landing (STOL) capability.

The jump strut's potential for applications in both military and commercial aircraft markets spurred Grumman to seek a partner in the program. "Menasco was chosen because it has experience and expertise in the development and manufacturing of aircraft landing gear," says Hutzler.

"Grumman makes airplanes – not landing gears. As such the business prospects for the jump strut within Grumman were limited to applications on our own aircraft. With Menasco on board though, the sky is the limit," he says.

Improving take-off and landing capabilities has become a design priority for military aircraft because of a concern over battle shortened runways. "In a jungle or desert battle scenario, a pilot might not have the luxury of a long airstrip. There might be a be a bomb crater in the middle of the runway, or some other obstacle," says Gebhard.

Dale Hawthorne, Menasco vice president of marketing, says the company is very excited about the potential market applications for the jump strut. "For the first time, a landing gear is becoming an aid to performance rather than just wheels to roll on the ground." ■

Grumman Corp. Elects Walsh Vice President

On Friday, June 21, Grumman Corporation's board of directors elected Dave Walsh a corporate vice president.

In his new post, he reports directly to Dan Huebner, senior vice president of Marketing and Development for Grumman Corporation.

Dave Walsh

Next edition:
Plane News – July 12
Grumman World – July 26

After a three-year tour with the U.S. Army in Europe, Walsh joined Grumman in 1954 as a flight test analyst. In 1957, he became assistant to the director of Flight Test.

Two years later, he moved into Sales and Marketing, and in 1962, he was appointed a senior sales representative for the TFX F-111 Program. Walsh became marketing manager of the VFX F-14 Program in 1966. The following year, he was named manager of Navy Aircraft Marketing.

From 1969 to 1975, he served as deputy director of Marketing. He was appointed director of Marketing in 1975, and was elected a Grumman Aerospace vice president in April 1982.

In 1980, Walsh was named vice chairman of the Grumman Political Action Committee (PAC). He's been PAC chairman since 1982.

A graduate of Paul Smith's College, the new corporate vice president attended Grumman's Senior Management Development Program in 1973, and the Harvard University Advanced Management Program in 1979.

Walsh is a member of the Association of Naval Aviation; the Navy League of the United States; the Air Force Association; the Marine Corps Aviation Association; and the Association of the U.S. Army. ■

About the Cover

David Satz and Gerald Clermont tune an antenna array for tests in the Plant 14's Radio Frequency Anechoic Chamber. The plant was recently renamed in honor of William T. Schwendler. More on page 4.

At the recent Paris Air Show, Grumman's X-29 drew 15,000 people a day. The original X-29 is still undergoing flight testing at Edwards AFB. The Air Show's X-29 is a full-scale mockup.

Remembering Bob Somerville: A Hard-Working, Soft-Hearted Guy

Robert W Somerville, 56, died of a heart attack on Sunday, June 16. He is survived by his wife, Helen, and their three children: Scott, William, and Beth; and a sister Eleanor Gaddi.

Since 1984, Somerville had been vice president-Regional Offices, responsible for the company's nationwide network of regional offices.

Somerville joined Grumman in 1953 after leaving the New York Telephone Company. He was a graduate of the College of Engineering at New York University and received his masters degree in 1959.

From 1958 to 1959, Somerville was group leader-Equipment and Process Engineering. In 1959 he became assistant to the director of Test Equipment and Process Engineering. In 1964, he began a two year stint as section head of plans and programs in the Product Support Department. He was promoted to deputy director of Product Support in 1966.

In August 1970, he was elected president and a director of Grumman Pacific Ltd., then a subsidiary of Grumman International, Inc., in Singapore. The following year he was named a staff assistant to the senior vice president of Grumman Allied Industries, Inc.

The Grumman Allied board of directors elected him a vice president in November 1972 and executive vice president in September 1974. Two years later, Somerville became president of Grumman Allied.

Somerville also served as a director of Grumman Aerospace Corporation and Grumman Credit Corporation.

During his 32 years of service to Grumman, Bob Somerville touched the lives of many Grummanites. The comments of several of those who worked with him and knew him well follow:

"Bob Somerville, in his 32 years at Grumman, was involved in virtually every aspect of the company's growth. Recently, his responsibilities were the administration of our various district offices around the country, and participation in discussions about the new directions our company will take. We will miss him badly. He was a good friend." John C. Bierwirth, Grumman Corporation Chairman.

"All of us are saddened by the sudden and unexpected passing of Bob Somerville. To those of us who knew and worked closely with him over the years, his fierce dedication and loyalty to Grumman will always be remembered. He will be missed from our ranks." George Skurla, Grumman Corporation President.

"To most people, Bob was a very strong man, driven to win, for himself, for his company, for his country and most of all for his family.

"He enjoyed the challenge, would run to the thickest part of the fight and had a unique capacity to take many of us with him.

"Yet for those of us that came to know him, we realized inside he was one of the most gentle, warm human beings you could ever meet.

"I will surely remember the 25 years of struggle and success knowing that my life is much richer, since I was able to call Bob a friend." Norm Reinertsen, senior vice president-Vehicle Division, Grumman Allied.

"Bob was a very strong and even inspiring leader. He always backed his people up 100 percent and, in turn, earned their loyalty.

"He was never one to shirk responsibility. During his career he was associated with a number of very difficult programs. Despite the problems he faced, I never once heard Bob complain. He just dug in and worked as hard as he could in each and every case." Wells Darling, president-Marine/Energy, Grumman Allied.

Clockwise from above left: Bob Somerville, a Grummanite for 32 years; with Bob Myers at 1980 United Way drawing; answering questions at 1984 Shareholders Meeting; enjoying a joke with Grumman Corp. president Joe Gavin in 1981.

"Bob's most outstanding quality was his ability to motivate the people he came in contact with. He was a take-charge kind of guy who demonstrated leadership in every aspect of his life.

"Those of us who knew him are better people as a result of the relationship. He was a real friend and we'll all miss him." Sam Rozzi, president-Grumman Olson.

"I started working for Grumman under Bob Somerville back in 1959 while I was still a college student. He loved Grumman and was a real 'company man'. It was an honor to work under him. He instilled a 'can do' feeling in everyone on his team.

"Bob was always involved in every aspect of a program – from the nuts and bolts to the personal lives of his people. He had an emotional strength that helped everyone around him to feel better and work harder. There was nothing he wouldn't do for his people. His passing is truly a loss for all." Forrest C. Towl, vice president-Grumman Allied.

"Bob was the most dynamic individual that I ever worked for or with. He had a powerful personality and was deeply committed to Grumman.

"People who knew him, remember him as a very caring person. Underneath all the bluster and hard business sense, he was one of the most softhearted guys I've ever known. His contribution to the lives of those people he touched over the years will never be forgotten." Bob Landon, president & treasurer-Grumman Ohio Corp.

"Bob Somerville was a fine team player and a great 'make things happen' manager. He was a major contributor to winning efforts on a number of important Grumman programs.

"Bob was a wonderfully warm personal friend to me and so many others. His passing is a great loss to all of us." Ed Dalva, retired vice president, general manager – Stuart Operations.

"Bob Somerville was an intense person who believed that anything in life that was worth doing was worth doing right. He always tried his best and never quit." Doug Schmitt, manager-Employment & Personnel Administration, Grumman Corporation.

"As a boss, Bob was tough but fair. He never asked anyone to give any more than he did, and he always gave his best.

"As a person, he was respected and loved for his thoughfulness and his concern for everyone. He was always there to lend a helping hand, whether it was in someone's business or personal life.

"There was a leprechaun-like quality about him. He possessed a delightful Irish sense of humor that made it a pleasure to work for him." Anne Prochoroff, executive secretary to Bob Somerville.

"Bob was extremely personable – very well liked by everyone who met him. He never spared himself – a real 'shirt-sleeves' worker's worker. You'd have a hard time finding anyone who worked harder or was liked more by his associates than Bob.

"During Grumman's efforts to broaden its base of products, Bob was tireless in his efforts to make a go of each of the programs. He was tenacious and never gave up." Robert Loar, retired chairman, Grumman Allied Industries ■

Grumman Facilities Tunes Up With New GDS System

Multipurpose Computer Software Keeps Better Tabs On Maintenance Jobs

A sophisticated, numerical control router in Plant 3 suddenly stops one day, much to the puzzlement of the foreman and crew.

During a midsummer heat wave, the air conditioning in Plant 35 breaks down.

A leak develops in a supply line valve to a processing tank. Is a spare valve available?

What do these three hypothetical situations have in common? Well, they involve Grumman property which is serviced by the Facilities Maintenance department. And the Facilities crew can now better serve the Grumman community, thanks to its new, computerized Maintenance Management System.

The Maintenance Management System is marketed by the Grumman Data Systems Division. It falls into a larger category of computer systems known as integrated manufacturing systems (IMS). They provide decision makers with the information they need to run their operations more effectively.

Facilities keeps tabs on buildings, utilities, and myriad manufacturing machines, to name just a few categories. The Maintenance Management System will eventually encompass the maintenance of them all.

Since the system is still in its implementation phase, the first goal is to support factory equipment. "We're primarily in business to make a product," says George Turney, general manager, Facilities Maintenance. "So our number-one priority is to put manufacturing equipment on the system.

"But the system is being set up with provisions for heating/ventilation/air conditioning, transportation, and utilities, among others," he adds. "Putting these on the system would enable us to better define total costs. For example, how much does it cost to operate the main steam plant? That type of data."

Plants 2, 3, 12B, 30, and the Facilities Operations Center outside Plant 2 are now on-line, and Plant 56 in Glen Arm, Maryland will soon join the user family. Each site has its own color computer terminal.

Grumman is focusing on aircraft and electronic systems plants first – again, because these plants constitute the lion's share of Grumman's manufacturing business and use similar equipment. There is a strong likelihood that the new Data Systems plant in Holtsville will be linked in the future.

Facilities Maintenance is what's known in the computer trade as a "beta test site" – the first user of a computer system. Such a user tries out a system, and often modifies it extensively. In Grumman's case, computer experts from Facilities as well as Data Systems are adapting an existing software package to Grumman's manufacturing environment.

That package was called the Maintenance Control and Service Allocation System (MCSA). Grumman Data Systems has exclusive U.S. marketing rights to MCSA.

The Maintenance Management System mainly consists of three functions. *Work order management* generates and controls work orders. A *spare parts inventory* provides inventory control and generation of purchase requisitions and a list of spare parts for each corporate resource. And *equipment maintenance control* retains name-tag information and maintenance history for each resource, including vital information on utilization and downtime, and sets maintenance schedules. "Name-tag" information refers to model and serial numbers, date purchased, cost, manufacturer, and other crucial data.

"You're basically looking at a system that promotes cost-avoidance," Turney notes. "Equipment downtime is expensive, and better maintenance will lessen it. But cost avoidance is very hard to document in terms of return on investment."

The system also promotes increased productivity, by streamlining clerical functions that were previously done manually. In the area of preventive/periodic maintenance, for example, the system schedules the task, generates a work order, and enables the manager to check progress.

Calls for maintenance will go to the respective plant's Facilities office – the same people who did the manual paperwork before. Since the system is simple to operate and understand, a minimum of training is required.

'Our number-one priority is to put manufacturing equipment on the system.'

"The phone will ring, and a caller will be asking someone to come perform corrective maintenance – say, there's an oil leak on a piece of equipment," explains Bob Fleming, senior systems analyst, Facilities Maintenance. "The information gets logged into the system, which creates a corrective maintenance work order. This gets issued to the maintenance worker, who checks out the problem."

If a technician needs to know what type of work should be done on a piece of equipment, he or she just has to check a computer printout of the preventive maintenance procedures. Diagnostics may also be entered into the system, saving time for the next technician who has to make the same repair.

One very obvious benefit: eliminating duplicate "house calls." The system will tell the operator if there is already an order issued for a particular task.

Even more important, the department can now assign and schedule priority to tasks. "We have a finite number of people and resources – and an infinite number of problems can occur," Fleming says.

With histories of each item of manufacturing equipment on-line, similar equipment can be compared, and trends analyzed. Preventive steps may be taken taken before a malfunction crops up. Or, minor repairs may be done while trouble is still relatively minor. Maintenance headaches can be prevented from becoming a maintenance catastrophes.

The GDS Maintenance Management System will eventually help Facilities keep tabs on all the buildings, utilities and manufactruring machines that must be maintained.

"A byproduct of all this is better scheduling of manpower and equipment – which eventually translates into large dollar savings," says Robert Ptacek, resources manager for Facilities Maintenance.

Color is used by the computer screen to provide status information. When calling up a list of replacement parts for a chem mill machine, for example, those shown in yellow are overstocked, those in white are correctly stocked, and those in red are understocked. Throughout the system, red is used to flag potential problems.

Facilities first investigated getting a computerized maintenance management system six years ago. The consulting firm Booz, Allen, Hamilton did a study of Grumman's machining operations, which included preventive maintenance. At that time, Grumman kept only handwritten records on equipment maintenance, making it difficult for management to review trends or compare data.

These records relied on the scheduling of preventive maintenance on a time-lapsed basis. However, the machines were being used at varying rates. So, some underutilized machines were getting more maintenance than necessary, while others were receiving less than they should have.

Booz, Allen, Hamilton advised Grumman to obtain a computerized maintenance management system. While the department evaluated systems for possible purchase, it also began upgrading its database, with the help of an IBM Displaywriter. Later, a small system that ran on personal computers was added as a stopgap. Having the operation at least partially automated saved time and effort when the new system was installed.

The system keeps Facilities Maintenance in step with the drastic changes occurring in the manufacturing world, as plants are modernized with new machines that often incorporate sophisticated electronics. "Maintenance is no longer a twist of a nut here, a squirt of oil there," Fleming notes. "You have to know what you're doing. So standard procedures are important."

"Our system is the state-of-the-art for such systems, because we are matching it to our requirements," notes Turney. "When we went shopping, we saw several systems that were developed by companies for use in-house, then marketed outside. But they tended to be too industry-specific.

The system is designed to be universal. It is also modular, so it can be marketed by GDS to fit the needs of companies of varying types and sizes.

"We wanted a system dedicated to maintenance management that could be used with a variety of hardware," says Turney. "The GDS system offered us both." ■

Bierwirth Awarded LIA Medal Of Honor

Grumman Chairman Jack Bierwirth was presented with the Long Island Association's Medal of Honor at the group's recent awards dinner.

The association is a regional chamber of commerce for Nassau and Suffolk Counties. The Medal of Honor is annually presented to an organization or individual, in the association's view, has contributed most to bring distinction to Long Island.

Shown are (L-R) Association President Walter Oberstebrink; Dr. Robert Smithdas, executive director-community education for Helen Keller National Center for Deaf-Blind Youths, recipient of Harry Chapin Award for Community Service; Grumman Chairman Jack Bierwirth, recipient of LIA Medal of Honor; and Nassau County Executive Francis Purcell, recipient of Community Distinguished Service Award. ■

Futuristic Schwendler Development Center Gives Life To

Newly Expanded Plant 14 Renamed In Honor Of Company Founder

In a dedication ceremony on June 26, Grumman renamed Plant 14 for the man whose professional integrity helped give Grumman its reputation for excellence in engineering – William T. Schwendler.

The William T. Schwendler Engineering Development Center is a high-technology labyrinth that houses electronics manufacturing and test facilities, giant simulators, advanced development laboratories, radar receivers and transmitters, and computers by the trainload. Including its most recent addition, the Center sprawls over 300,000 square feet. More than 800 Grummanites work there.

At the Center, newly designed, one-of-a-kind equipment gets turned on and tested for the first time, and components are first joined together – "integrated" – in three-dimensional form. It is also the place where sophisticated aircraft are "flown" for the first time, using an array of simulation equipment to test the operation of electronic flight controls under stringent performance conditions.

"The Center gives the engineer a chance to get a hands-on look at how systems work," says Center Director Chris Witt. "It is where their paper analysis first takes shape."

The Center was first opened in 1960 as a system development facility, and has grown to include a full three-story addition for the E-2C as well as 20,000 square feet for the system development of the F-14D.

The Center's most recent addition is a 96,000 square foot, three-story wing adjoining the one-year-old E-2C Systems Engineering and Software lab. These two additions and the tiled three-story atrium that adjoins the three sections give a new look to what used to be plain old Plant 14.

On its first floor is a new advanced crew station laboratory with a high bay ceiling and a spiral staircase. It was designed specifically to house a 24-foot spherical fixed-base simulator. Tests can be viewed through glass windows in a second floor corridor.

'At the Center, newly designed equipment gets turned on and tested for the first time.'

"Also on the first floor of the new wing is a design center for very large scale integrated (VLSI) circuitry, aircraft program electronics, a lab for the high speed data bus that ties all the building's computers together, and an advanced cockpit technology mockup facility," notes Witt.

Computer and software specialists are one flight up. A large, sunlit room is devoted to electrical assembly, and there is also a systems integration and test laboratory. The offices of engineers and administrative people are on the third floor in an open-plan area divided by those ubiquitous multicolored dividers.

The microelectronics development and production facilities are on the lower level. Integrated circuits are produced in a brand-new "clean room" of the Silicon Valley variety. Technicians in sterile apparel work at microscopes in a room designed to be virtually dust-free, and at a constant temperature.

The E-2C systems engineering and software lab takes up about one-fourth of the entire Schwendler Center. It is actually a separate building – it shares no walls, floors, corridors, entrances, or exits with the rest of the Center.

The building was designed to Department of Defense specifications for computing facilities, and every facet of the building's design was analyzed for its impact on security. There are 47 integrated computer systems on the facility's first two floors, and two 13-computer networks on the third.

No one can enter or leave the facility without passing the guard in the lobby, and most of the building's interior consists of controlled areas. To work inside, you need a secret-level security clearance. Doors lock automatically on both sides; an escort must type a security code onto a cypher-lock keypad to permit a visitor to enter or leave.

Repair personnel for heating, ventilation, air conditioning, electrical, and other aspects of the E-2C building never set foot inside. These systems are housed in the main Schwendler Center building. There is over a foot of airspace between the walls of both.

"The 'innards' of the old building are to be upgraded by next year, too," Witt points out. Included in the plans are an administrative service center, which will handle activities such as mail distribution.

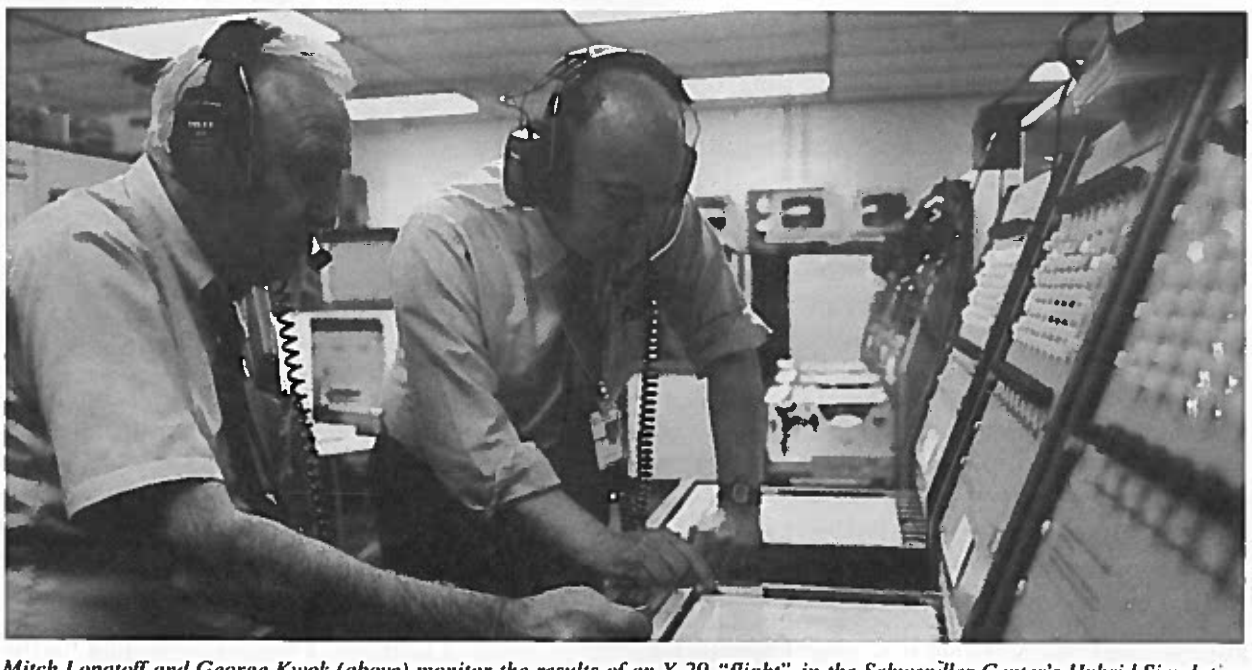
Down the hall, a new video system will enhance Grumman's cockpit simulators. Computer generated graphics provide realistic, three-dimensional images and an unlimited view of landscapes, airfields, and moving objects. This lab currently uses a wall mounted terrain model depicting a runway and surrounding three-mile area.

The new F-14 Avionics Development Lab will occupy an entire quadrant of the old first floor, increasing from 5,000 to 20,000 square feet of floor space. The lab's computer area, encompassing 10 mainframes, will be up and running by the end of the summer.

Early next January, the first of two F-14 forward sections will arrive at the lab. The two structures will be used to evaluate the operation of avionics components as well as their integration into the airframe. One of the structures had long been a centerpiece of the old lab; it and its twin are now undergoing structural changes and refurbishment in Plant 5's Product Development Operations Center.

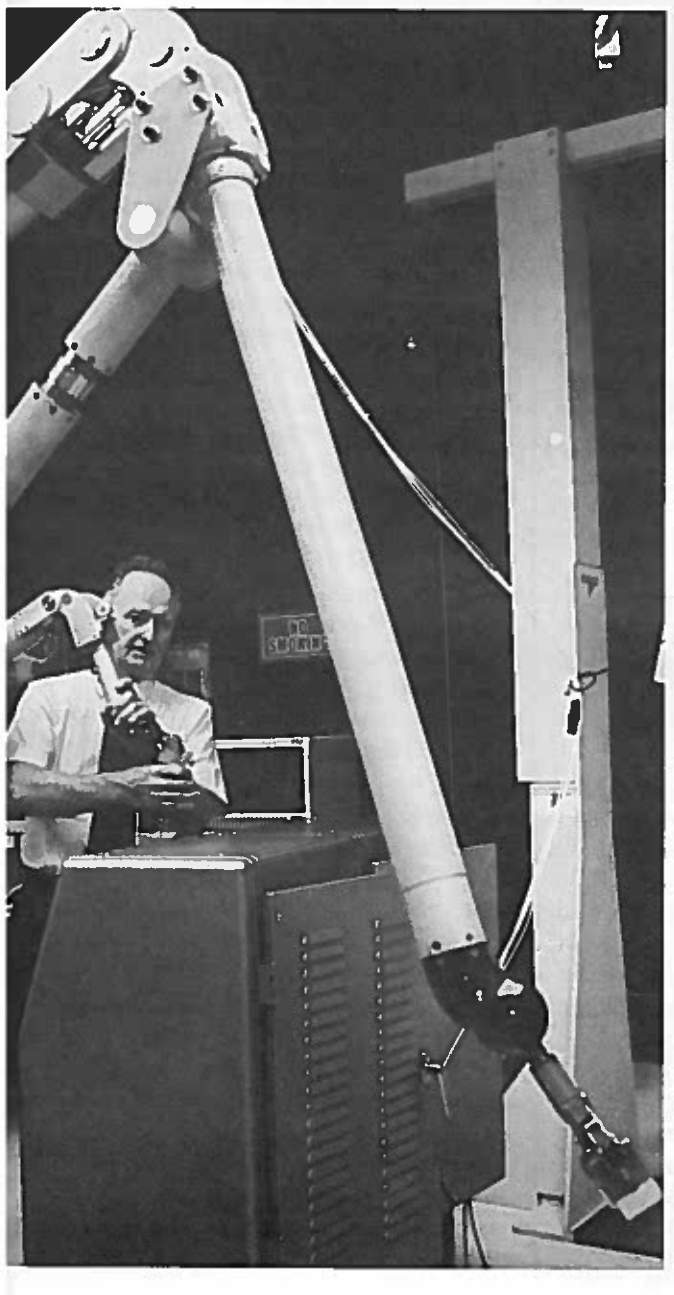
A Grumman-designed space-based radar array is currently being tested in the Center's anechoic chamber. In the months ahead, a large part of the Center's work force will be devoted to space programs as Grumman concentrates on its three Space Station study contracts.

"We see our markets changing. We see Grumman doing business with new and different customers – offering new and different services," Grumman Chairman Jack Bierwirth remarked at the annual shareholders meeting. The William T. Schwendler Engineering Development Center will make this vision a reality. ■



Mitch Lopatoff and George Kwok (above) monitor the results of an X-29 "flight" in the Schwendler Center's Hybrid Simulation Laboratory. A construction workman (upper L) puts some finishing touches on the building's new atrium. Charlie Falco (upper R) takes off in the Fixed-Base Cockpit Simulator. Erik Eriksen (R) operates the dexterous manipulator in the Large Amplitude Space Simulator.

High Tech Ideas



Counterclockwise from upper left – a young Bill Schwendler at Grumman during the early years of the company; Schwendler (R) looks over drawings of the Gulfstream II with Grant Hedrick and George Doukas in 1967; and in a pensive mood at the 1971 Annual Meeting.

Grumman's Engineering Excellence The Legacy of Bill Schwendler

"A stickler for quality," "a brilliant engineer," "a caring and concerned boss," – those are some of the labels that still stick to the name of Bill Schwendler.

William Theodore Schwendler, who died in 1978 at the age of 74, was a kind and thoughtful man who believed in getting the job done right.

Schwendler was there at the beginning. In 1930, along with his new business partners Leroy Grumman and Jake Swirbul, Schwendler helped roll open the doors of a rented garage in Baldwin, Long Island, signifying the birth of the Grumman Aircraft Engineering Corporation.

The aviation industry was still in its infancy and aeronautical engineering was only just beginning to emerge as a respectable academic discipline. To the new corporation, Schwendler brought both professional aeronautical engineering and a solid base of industrial design experience. He also brought a calm and extremely pragmatic managing style that both clashed with and complemented that of the more brash and excitable Swirbul. As an engineer, he was most at home with the technical details of his discipline, which made him a match for Roy Grumman's creative engineering style.

Within a year of the new company's start, Schwendler demonstrated his extraordinary talent when he designed the FF-1 fighter plane. The FF-1, with its retractable landing gear, and reputation for exceptional ruggedness, helped Grumman to earn the nickname Iron Works. Flying at 200 miles per hour, the FF-1 was also the fastest fighter of its time.

The toughness designed into the FF-1 was a trademark of Schwendler's work. When Grumman was winning contracts and building airplanes for the Navy during World War II, Schwendler worked tirelessly to make the most durable aircraft possible. He wanted to make certain that the company lived up to his personal vow to build airplanes that "nobody could break up, and nobody could shoot down."

Out of that design philosophy emerged a series of historic Navy fighters that bore the brunt of the air war in the Pacific – the F4F Wildcat, F6F Hellcat and the TBF Avenger.

After the war, he showed that he was an engineering problem solver with the capacity to grow with advancing technology. His foresight and careful planning helped launch the company into the jet age with the F9F series of Panthers and Cougars for the military.

He also guided Grumman into the commercial aircraft market with a number of amphibian transports and, most notably, the Gulfstream executive jet.

Schwendler is also remembered as a man who put the company's employees first and foremost at all times. He was a founder of the Grumman Scholarship Program, for which he was a director and active participant until his death, and a founder of the company's Mayo Clinic program.

In all, Schwendler served Grumman for 48 years – as chief design engineer until 1950, a senior corporate officer until 1974, and as a director of the company until his death. While focusing his professional energies on technical design problems, he devoted equal time and personal energy to make life a little better for those around him.

By personal example, Schwendler played a major role in setting the standard of engineering excellence that has since become a Grumman hallmark. His legacy to Grumman is one of integrity, patience and intelligence. ■

J.G. LaPenna

R.L. Santoro Jr.

R.C. Wuestefeld

M. Vela

W. McCormick

A.C. Raeburn

J.F. Klafin Jr.

J.V. Hartung

D. M. Nicoli

N.C. Stoia

S.I. Abstaz

A.R. Garnjost

R.J. Lebitz

E.C. Norman

D.L. Moyer

C. Rink

J.P. Medeiros

J. Cabral

O.L. Reavis

A.G. Ferry

M.R. Silva

M. Contente

Service Milestones

40

Edward R. Solosky, EBW Final Assy. (2)
Marie M. Franzese, Food Serv. (2)
Frank E. Bunce, Struct. Anal. Staff (35)
John F. Miller, Pwr. Plt. & Environ. Staff (287)

35

Richard E. Waldt, Prelim. Des. Mgmt. (5)
James C. Vedder, Assy. Tool & Handlg. Equip. (6)
John H. Morrison, Conf. Data. Mgmt. (9)
Kenneth R. Fitch, Comp. Sys. Mgmt. (35)
John G. Roukis, Fl. Science Mgmt. (35)
James H. Richter, P.M. A-6 (40)

30

Richard W. Anderson, ILS Ops. Supt. (1)
Michael S. Antieri, Prog. Cont. (1)
Eugene S. Graziano, Mgmt. & Staff (2)
Joseph Lago, Mech. Proc. Engr. (2)
Arthur W. Walter, Conv. Mach. (3)
Walter W. Smith, Env. Cont. & Test (5)
Edward M. Okon, Pres. Serv. (5)
Joseph C. Welsch, Plan/Sch. & Est. (6)
Andrew Swallow Jr., Maint. (6)
Billie R. Brown, Hyd. Sub. (6)
Lawrence J. Cervellino, Mat'l. Ops. (6)
William T. Kennard, ILS Elect. Pkg. (6)
Joseph P. Spicola, Corp. Inst. Syst. (7)
Gerard Kreussling, Corp. Inst. Syst. (7)
Martin R. Johnson, Prod. Mgmt. (7)
Richard L. Ellingsen Jr., Crew Syst./Equip. Integ. (9)
Aldean L. Marrs, Qual. Lab. (10)
Richard J. Zants, Qual. Lab. (10)
Charles Morris, Maint. (12)
John O. England, Meas. Std. Lab. (12)
Henry Frost Jr., Aero Test (13)
Milton F. Michalowski, Elect. Test (14)
Harry A. Volz, Sec. & Pres. Serv. Mgmt. (18)
Francis L. Mazzara, Trans. (20)
Warren W. Ungerer, Insp. Mach. Parts (24)
Richard Heiligenstadt, Facil. Mgmt. (30)
Michael DiMaggio, Prod. Prog. (30)
James P. Murray Jr., Crew Syst./Equip. Integ. (35)
John B. Smedfjeld, Loads & Syn. Staff (35)
Vincent N. DeVito, Mfg. Prog. Mgt. (40)
Albert P. LaValle, Struct. Des. (40)
Charles E. Teufert, Mfg. Tech. (43)
William Gaine, Maint. (44)
Richard C. Stevenson, Train. Sys. Prog. (47)
Joseph Morgan, Prod. Mgmt. (77)
Joseph M. Schneider, Qual. (77)
Peter W. Rapelje, Conf. Data. Mgmt. (106)
John J. Proscia, ILS Mech. Equip. Engr. (110)

25

August Hunka, Sub. Assy. (1)
Joseph G. LaPenna, Integ. Verif. & Valid. (1)
Robert L. Santoro Jr., Human Factors (1)
Robert C. Wuestefeld, Welding Grp. (2)
Mario Vela, Cap. Monit. & Cont. (2)
Elizabeth M. Marsh, Parts Paint (3)
William McCormick, Assy. (3)
Alexander C. Raeburn, Prod. Cont.-Parts Cont. (5)
John F. Klafin Jr., Guid. & Cont. Sys. Inte. (5)
John V. Hartung, Ops. Anal. (5)
Dolores M. Nicoli, Ex. Staff (5)
Nicholas C. Stoia, Avion. Dev. (7)
Seymour I. Abstaz, Software Sys. (14)
Allan R. Garnjost, Electro/Mech. Des. (25)
Richard J. Lebitz, Prog. Mgr. E-2 (25)
Edward C. Norman, Navig. & Cont. Equip. Des. (35)
George A. Emilio, ILS Prod. Supp. Mgmt. (106)
Alfred E. Adams, A/C Avion. Sys. (268)
Donald L. Moyer, Adv. Sys. Tech. Mgmt. (289)
Charles Rink, Boats, (Grumman Allied)
Joseph P. Medeiros, Pearson Yachts (Grumman Allied)
Jose Cabral, Pearson Yachts (Grumman Allied)
Olin L. Reavis, Pearson Yachts (Grumman Allied)
Alfred G. Ferry, Pearson Yachts (Grumman Allied)
Manuel R. Silva, Pearson Yachts (Grumman Allied)
Manuel Contente, Pearson Yachts (Grumman Allied)

British Welcome Their Man 'Chuck' Back For X-29 Scoop

Aviation enthusiasts at the Royal Air Force Museum in Hendon, England, gave Grumman Chief Test Pilot Chuck Sewell a hearty welcome on June 5. On the way home from the Paris Air Show, Chuck stopped by the museum to give a talk on the X-29 technology demonstrator.

Grumman Chief Test Pilot Chuck Sewell (L) talked with RAF Air Vice Marshall Ken Hayr and Wing Commander Bill Wood (R) during his visit to the Royal Air Force Museum in Hendon, England.

It was his first visit to the RAF Museum which lies on 10 acres of the former historic airfield at Hendon, a suburb of London. But for the past three decades, the Grumman Chief Test Pilot has been visiting England every chance he gets.

Thirty years ago, Sewell was a young U.S. Marine assigned to the Royal Air Force as an exchange fighter pilot. During his two years with the RAF, he was a member of the RAF aerobatics team and had his name enscribed in the record books as the first Marine to become an RAF flight commander.

"The RAF fighter pilots also gave me the name "Chuck," recalls Sewell. "They said, 'we can't call you Charlie,' so they started calling me 'Chuck.'" And it's stuck ever since.

Prior to his presentation, Sewell toured the RAF Museum which houses many of the planes he flew during his RAF career. He jumped at the chance to climb aboard the only Lancaster bomber of World War II fame still in existence today.

The British are avid aviation buffs and they listened intently as Sewell explained the X-29 test flight program. During the question and answer session, one former RAF pilot asked Sewell, what was the best plane he ever flew. "The F-14," replied the chief test pilot, without hesitation. "The F-14 with its new GE engines is the best fighter in the world."

The questioning period seemed a bit reserved compared to what followed. After the formal session, the audience surrounded Sewell. Armed with cameras, they jockeyed for position to snap a photo of the former RAF flight commander who had made his mark on the aviation world as a premier test pilot. ■

Grumman Awarded For Efforts With Retarded

The Grumman Employee Contribution Council received the 1985 "Friend of the Children" from the Society For Good Will To Retarded Children on June 1 at the society's 18th Annual Dinner Dance.

The Society For Good Will works directly with the Long Island Developmental Center (LIDC) in order to make life more enjoyable for the Center's mentally retarded and disabled residents.

"The Grumman Employee Contribution Council is a wonderful group whose significant contributions clearly benefit the children at the LIDC," says Lita Cohen, the society's president.

The Contribution Council became interested in the LIDC in 1983 when the Center needed assistance in building Mashikian Park, a therapeutic recreation area for disabled children.

In addition to the Mashikian Park in 1983, the Council has also funded the LIDC on their Sensory Garden project in 1984 and has supplied the facility with surplus medical equipment.

The Council, which has been in effect since 1978, changes its Grumman participants every three years in order to get fresh ideas from new sources and to keep the Council unbiased.

The Employee Contribution Council gives funds to non-profit organizations, dealing with health services, educational facilities, community services, and cultural activities.

Most members of the Council were already active members in the community, and thought being on the Council would make them more aware of the problems that surround them, according to Floyd Cisco of the Corporate Equal Employment office, and an active member of the Council.

"Serving on the Council has been a very enlightening experience," Cisco says. "I am very proud to be a part of the group and it was great to be able to accept this Friend of the Children award on behalf of the Grumman. It's like family taking care of family." ■

Come Join The Grumman Family On July 27

Picnickers Asked To Help LI's Hungry By Contributing To Food Drive

Grummanites and their families from all over Long Island will meet at Calverton on Saturday, July 27 for one of Grumman's biggest traditions – the 44th Annual Family Picnic.

For those who want to set up their picnic tables early, the gate opens at 8 a.m. As in past years, Grummanites will come well prepared to cook their favorite barbeque fares on grills scattered throughout the Calverton grounds. This year, Grummanites are being asked to think of their less fortunate neighbors on Long Island.

At the family picnic, a timely new program is being launched to help fight hunger on Long Island. It's a food drive co-sponsored by The Long Island Regional Food Bank and the Grumman Employee Contribution Council.

"We want Grummanites to be aware that there is a hunger problem on Long Island," says Sharon Grosser, manager of Community Support Programs for Grumman Corporation and chairman of the Council. "The Council has been working with the Food Bank for some time, and we think the picnic is a good way for employees to get directly involved in helping those in need."

Grummanites are asked to bring cans of high protein food – such as peanut butter, soup, and tuna fish – to the picnic. These cans, collected when they arrive, will be stored by the Food Bank for distribution to Long Island's needy.

All Grummanites and their family members are invited to attend this year's picnic. It's open to all Grummanites – from any company division and any location. Tickets are just $5 and children under 12 get in for free.

Because of the increased number of non-Grummanites attending the picnic over the past few years, an important new rule is going into effect. "No car will be permitted in the gate without someone showing a badge first," says Chet Baumgartner, director of Employee Services. "And no tickets will be sold at the gate – Grummanites must buy them in advance."

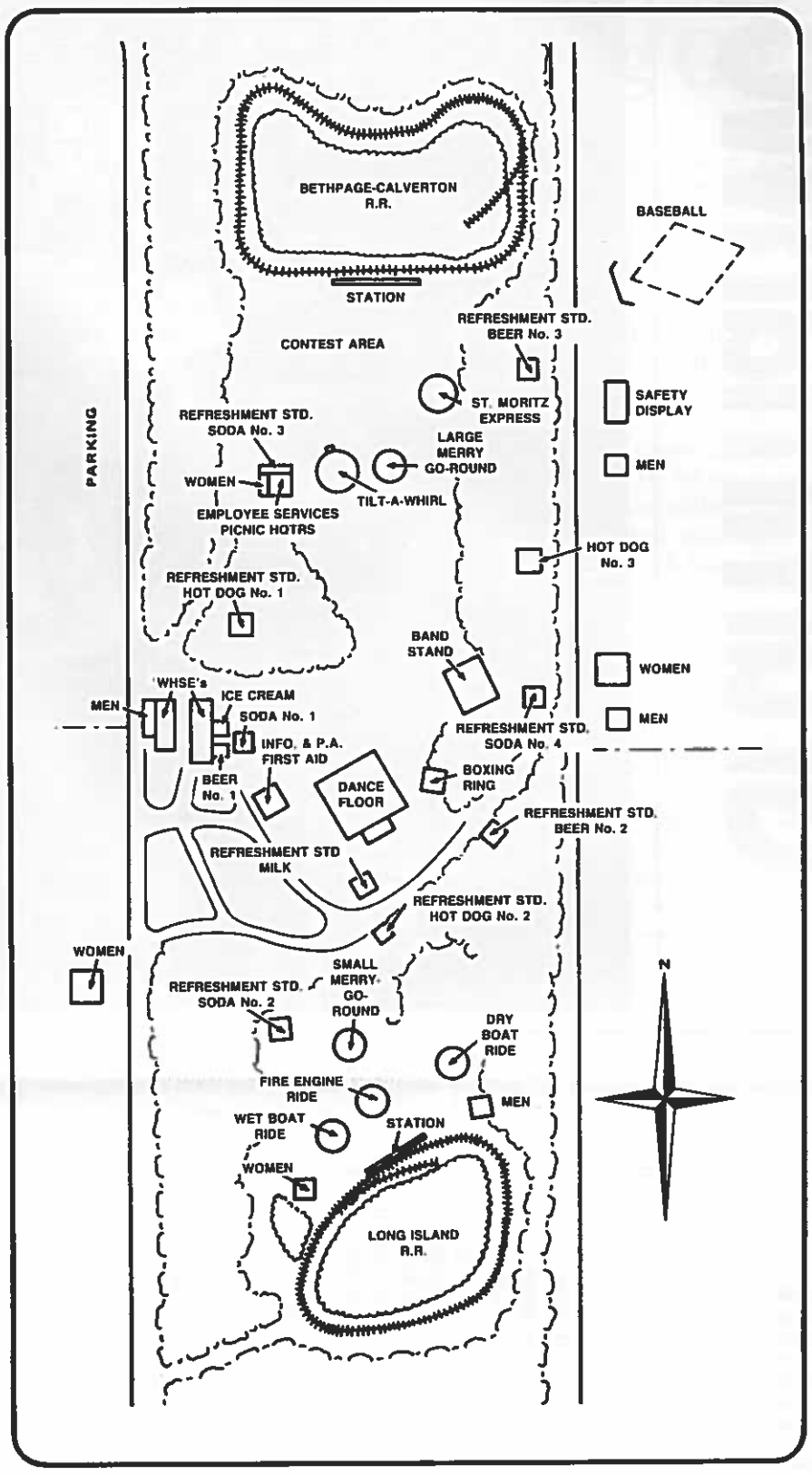
The fun will begin at 10 a.m. The flag raising ceremony will be immediately followed by the start of the sporting events. Games such as the egg-spoon race, the wheelbarrow race, the sack race, and many running races will provide fun for kids of all ages (including the adults). All first place winners will be awarded prizes, so all Grummanites are encouraged to participate.

Another first time event: the championship Nanshiki boys baseball team from Tokyo has been invited to Calverton to challenge the Nassau/Suffolk boys all-star Little League team.

Finger-snapping, toe-tapping dance music will be provided by the Grumman Employee Band beginning at 10:30 a.m., followed by three children's entertainment acts at 11:30 a.m. Amusement park rides will be set up for everyone to enjoy, including two railroads.

Refreshment stands around the grounds will give hungry picnickers their fill of hot dogs, ice cream, milk, beer, and soda. And if that isn't enough, 26 door prizes will be awarded to Grummanites and family members with tickets.

Picnic tickets are now on sale at all Employee Services offices, so plan to attend. It's a fun-filled day for the whole family. ■



New Assignments

A number of Grummanites received new assignments recently.

Data Systems - Gary Woghin, director, Planning, Control and Budgets.

Great River - Walter Maier, director, Production Engineering; Eddie Starling, director, Systems; Gerald Samborsky, deputy director, Industrial Systems; Sheldon Schwartz, director, Facilities Planning; Carol Sidorski, director, Administration; and Kenneth Walch, director, Special Projects and assistant to vice president-general manager Bruno Caputo. In addition to his Bethpage Operations responsibilities, Thomas Marino has been named deputy director of Quality at Great River Operations. ■

Obituaries

Gerard Kaplan, Radar Department, Plant 1, died May 23 at the age of 54. He had been with the company since 1984 and resided at 2577 Glenn Dr., Bellmore, N.Y.

William H. Kobel, Assembly Tooling and Handling Equipment, Plant 6, died May 21 at the age of 57. He had been with the company since 1948 and resided at 812 Bayview Ave., Bellport, N.Y.

Pasquala F. Simonetti, Operations Scheduling, Plant 235, died June 7 at the age of 47. He had been with the company since 1960 and resided at 35 Martin Road South, Bethpage, N.Y.

Richard M. Baril, Major Assemblies, Plant 5, died June 9 at the age of 45. He had been with the company since 1963 and his address was P.O. Box 346, Bethpage, N.Y.

Charles J.Murray, Central Receiving, Plant 24, died June 7 at the age of 55. He had been with the company since 1963 and resided at 405 Cliff St., Central Islip, N.Y.

Grumman Performance Captures Boeing Eagle

Grumman has received the Boeing Company's Operation Eagle award for cost consciousness and quality improvement.

"Together, we are in the midst of a revolution," noted Bruce Gissing, vice president-general manager, Boeing Materiel Division. "It is a pleasure to work with a company that is leading instead of following."

"You have demonstrated that one supplier can make a difference in meeting the challenges that face industry and the nation," said Boeing Vice Chairman Malcolm Stamper.

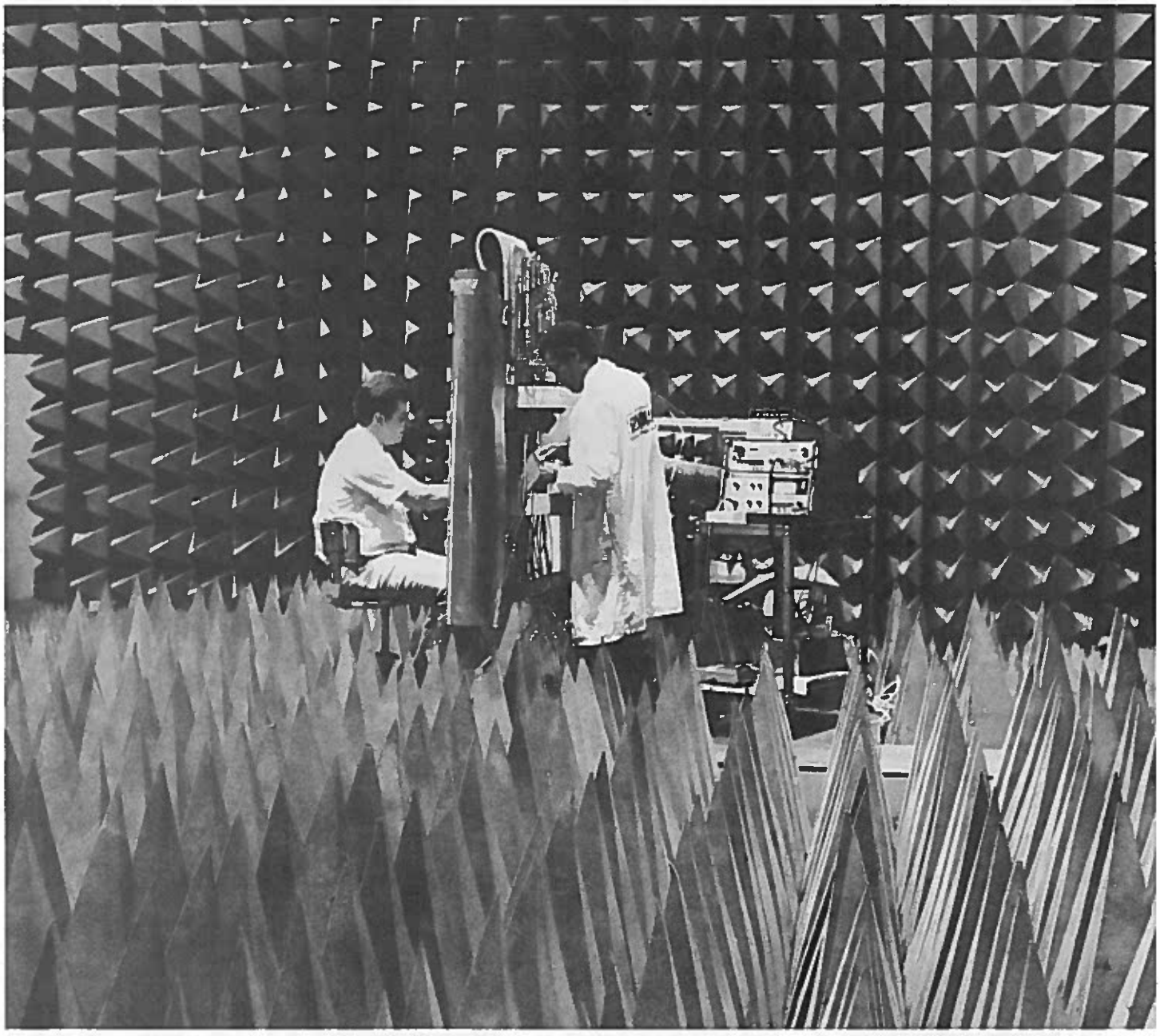
Grumman is a subcontractor on the Boeing 757 and 767 jetliners and a variety of groups and sites are involved in these programs. These include: the Aerostructures Division in Melville; Bethpage Operations; Milledgeville, Georgia; Stuart, Florida; and Glen Arm, Maryland.

The award is given for performance within discrepancy targets, set annually for each supplier based on its past performance. Grumman performed 39 percent under target during 1984. In first quarter '85, during which the target was lowered in keeping with the Operation Eagle formula, the programs performed 33 percent under the target. ■

Bruce Gissing, vice president and general manager of Boeing's Materiel Division, presents Grumman Aerostructures Division President Tom McGrath with Operation Eagle plaque. Looking on are Art Ponti, director of major outside production for Boeing, and Don Schlegel, Grumman's deputy director of Aerostructures Division.

GrummanWorld

June 28, 1985



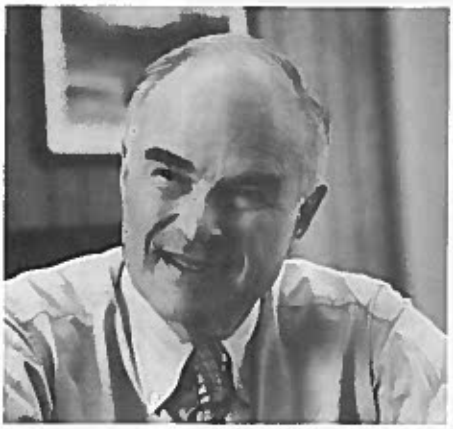
A Letter From The Chairman — Back Cover

New Landing Gear Gets The Jump On Takeoff — Page 1

Pl. 14 renamed W.T. Schwendler Engineering Development Center — Page 4

44th Annual Grumman Family Picnic Slated For July 27 — Page 7

A Letter From The Chairman



Grumman has made it into the headlines for two reasons in the past few weeks. One has been a source of great embarrassment to us; the other served to remind us of our worth. Both give us plenty to think about.

First, the ashtray. There is no way we can produce seven ashtrays over 15 years at a reasonable price. Tooling and setup time for an item like that will create a price tag that is, bluntly, far out of line with its value. We used poor judgement when we accepted that order. But I think it's important for our employees to understand that the price was honest and accurately reflected Grumman's manufacturing costs.

Simple items are most susceptible to being priced beyond their value. The only solution to this problem is something we've already done: identify items like the ashtray and get them out of our catalogue. Low-cost items that we cannot produce as efficiently as someone else – provided they do not affect the safety or performance of our products – have no place on our parts list.

However, in the final analysis, we must recognize that we have an obligation to our customer to supply what is needed to make the product complete. If our customer needs an item that isn't on our price list, and can't obtain it from any other source, we may end up producing the item ourselves. And that's going to be a tough call to make.

In the other series of headlines about us, Grumman was the beneficiary of a Wall Street phenomenon: herd impulse buying.

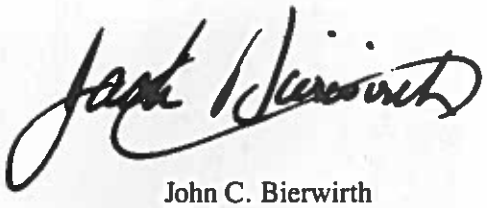
As clearly as we get the story, some firm in Wall Street put out an internal memo shortly after the announcement of the acquisition of Hughes by General Motors. The memo listed four aerospace companies – one of them was Grumman – that might be takeover targets. Typically, the memo became a topic of conversation and there was a great deal of speculation about whether someone would try again to gain control of Grumman.

The result of this speculation was that Grumman's stock went up 10 percent in a single day's trading.

Gradually, the reality of our position sank home. Wall Street came to realize that Grumman stock is owned by Grumman employees, retirees and friends – and Grumman's long-term growth is their primary concern.

I think we should be pleased that our technology is so highly regarded. We should also feel gratitude for the loyalty of our shareholders.

The experience reaffirms to us the importance of that ownership. Our high level of technology has been developed for Grumman and Grumman customers. It wasn't developed to be exploited for short-term financial gain.



John C. Bierwirth
Chairman

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